

AMENDMENTS TO THE CLAIMS

This listing of claims is to replace all prior versions and listings of claims in the application.

1-12. (Cancelled)

13. (Original) A method for inducing a cell to become a cardiomyocyte, said method comprising:

(a) introducing into said cell or ancestor thereof a DNA vector comprising (i) the nucleic acid of claim 1; (ii) a promoter; and (iii) a cardiogenic gene operably linked to said promoter;

(b) culturing said cell under conditions that result in expression of said cardiogenic gene operably linked to said promoter, whereby expression of said cardiogenic gene further enhances expression of cardiogenic genes by binding to cardiac-specific enhancer elements.

14. (Original) A method for specifically expressing a gene in a cardiac cell, said method comprising introducing into said cell or ancestor thereof a DNA vector comprising (i) the nucleic acid of claim 1; (ii) a promoter; and (iii) said gene operably linked to said promoter whereby said expresses said gene in cardiac cells and does not express said gene in cells that are not cardiac cells.

15. (Original) A method for determining the efficacy of a method of inducing stem cells to produce or become cardiac cells, said method comprising:

(a) introducing into at least one of said stem cells or an ancestor thereof a DNA vector comprising (i) the nucleic acid of claim 1; (ii) a promoter; and (iii) a

gene operably linked to said promoter, said gene encodes a selectable marker;

(b) performing a method for potentially inducing at least a portion of said stem cells to produce or become cardiac cells;

(c) performing a drug selection, wherein cells expressing said gene encoding said selectable marker are capable of surviving in the presence of said drug and cells not expressing said gene encoding said selectable marker are not capable of surviving in the presence of said drug; and

(d) determining the survival of cells following said drug selection, wherein a higher cell survival indicates a higher efficacy of said method of inducing stem cells to produce or become cardiac cells.

16. (Original) A method of identifying a cell as a cardiac cell, said method comprising introducing into said cell or an ancestor thereof a DNA vector comprising (i) the nucleic acid of claim 1; (ii) a promoter; and (iii) a reporter gene operably linked to said promoter, whereby said cell expresses said reporter gene if said cell is a cardiac cell and said cell does not express said reporter gene if said cell is not a cardiac cell.

17. (Original) A method of substantially purifying a cardiac cell from a heterogeneous population of cells, said method comprising:

(a) introducing into at least a subset of cells in said population or ancestors thereof a DNA vector comprising (i) the nucleic acid of claim 1; (ii) a promoter; and (iii) a reporter gene operably linked to said promoter, whereby a cell expresses said reporter gene if said cell is a cardiac cell and a cell does not express said reporter gene if said cell is not a cardiac cell; and

(b) determining whether a cell in said heterogeneous population is expressing said

reporter gene, wherein said cell is purified from said heterogeneous population if said cell is expressing said reporter gene.